

What Is Claimed Is:

1. An interlock circuit for use in a vehicle having a battery, a gear shift lever, and a parking brake, to prevent the operation of an auxiliary device having an ON/OFF switch,
5 wherein said auxiliary device is prevented from operating unless said vehicle is in a secure position, comprising:

a microprocessor; and

a plurality of sensors connected to said microprocessor for sensing various parameters, said sensors including a gear shift lever sensor for sensing when the gear shift lever is in the
10 park position, and a parking brake sensor for sensing whether the parking brake is engaged, wherein the gear shift lever may be shifted out of park only if the parking brake is engaged.

2. The interlock circuit in accordance with claim 1, wherein the auxiliary device is a lift device operable through one of said vehicle's doors, and wherein one of said sensors senses whether the door associated with said lift device is open, wherein the gear shift lever is
15 prevented from being shifted out of park if either the parking brake is engaged or the lift door is open.

3. The interlock circuit in accordance with claim 2, further comprising a solenoid circuit connected to said microprocessor and said gear shift lever to prevent said gear shift lever from being shifted out of park if either the parking brake is engaged or the lift door is open.

20 4. The interlock circuit in accordance with claim 2, further comprising a visual display for displaying the status of at least one of said plurality of sensors, said visual display being connected to said microprocessor.

5. The interlock circuit in accordance with claim 4, wherein said visual display comprises at least one light-emitting diode.

6. The interlock circuit in accordance with claim 1, further comprising a circuit for operating said microprocessor through the vehicle's battery, said circuit comprising a step down voltage regulator connected between said microprocessor and said battery.

7. The interlock circuit in accordance with claim 2, further comprising a circuit for operating said microprocessor through the vehicle's battery, said circuit including a step down voltage regulator connected between said microprocessor and said battery.

8. The interlock circuit in accordance with claim 1, further comprising a filter circuit provided between at least one of said sensors and said microprocessor for isolating said microprocessor from any voltage spikes.

9. The interlock circuit in accordance with claim 2, further comprising a filter circuit provided between at least one of said sensors and said microprocessor for isolating said microprocessor from any voltage spikes.

10. The interlock circuit in accordance with claim 8, wherein a filter circuit is provided between each of said sensors and said microprocessor.

11. The interlock circuit in accordance with claim 9, wherein a filter circuit is provided between each of said sensors and said microprocessor.

12. The interlock circuit in accordance with claim 1, wherein said gear shift lever sensor is a digital or analog sensor.

13. An interior circuit for use in a vehicle having a battery, a gear shift lever, and a parking brake, to prevent the operation of a lift device having an ON/OFF switch operable through a door of said vehicle, wherein said lift device is prevented from operating unless said vehicle is in a secure position, comprising:

a microprocessor;

a plurality of sensors connected to said microprocessor, said sensors being capable of sensing various conditions; and

a circuit connected to said microprocessor and said lift device for preventing the operation of said lift device unless at least one of said various conditions is present.

11 14. The interlock circuit in accordance with claim 10, wherein said various conditions are taken from the group consisting of: whether the gear shift lever is in park, whether the parking brake is engaged, whether the vehicle's ignition is ON, whether the lift device is ON, and whether the vehicle's door through which the lift device operates is open.

12 15. The interlock circuit in accordance with claim 10, wherein the lift device will not operate unless all of said various conditions are met.

13 16. The interlock circuit in accordance with claim 11, wherein the lift device will not operate unless all of said various conditions are met.

14 17. The interlock circuit in accordance with claim 10, further comprising a visual display for displaying the status of said sensors.

15 18. The interlock circuit in accordance with claim 10, further comprising a filter circuit provided between at least one of said sensors and said microprocessor for isolating said microprocessor from any voltage spikes.

16 19. The interlock circuit in accordance with claim 18, wherein a filter circuit is provided between each of said sensors and said microprocessor.

17 20. The interlock circuit in accordance with claim 10, further comprising an auxiliary device operable only when said gear shift lever is in park.

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